AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   Claim 1 (currently amended):   An image processing method for performing half tone

2   processing on input images using an error diffusion method, comprising the steps of:

3   generating a sine wave in which the amplitude and the frequency are modulated according to the

4   average value of a target pixel value and the peripheral pixel values;

5   adding quantization errors, said target pixel value and said sine wave;

6   quantizing said addition result by a predetermined number of grayscale levels; and

7   calculating the quantization errors of said peripheral pixels from errors by said quantization.

1   Claim 2 (currently amended): The image processing method according to Claim 1, wherein

2   said step of generating a sine wave further comprises the steps of:

3   calculating the average value of said target pixel value and said peripheral pixel values;

4   calculating the difference between said target pixel value and said average value[[,]] ; and

5   modulating the amplitude of said sine wave using said average value and said difference.

1   Claim 3 (original): The image processing method according to Claim 1, wherein said step

2   of generating a sine wave further comprises a step of independently controlling the cycle in the

3   horizontal direction and the cycle in the vertical direction of said sine wave.

1   Claim 4 (original): The image processing method according to Claim 1, wherein said step

2   of generating a sine wave further comprises a step of setting different initial phases of said sine wave

3   for the input image of each color.

1   Claim 5 (original): The image processing method according to Claim 1, further comprising

2   a step of scanning said input image in two directions and reading said target pixel value and said

3   peripheral pixel values,

4   wherein said step of calculating the quantization errors of the peripheral pixels further

5   comprises a step of calculating said quantization errors using an error filter which is selected from

6   a plurality of error filters according to said target image value.

1   Claim 6 (currently amended): An image processor which performs half tone processing on

2   an input image using an error diffusion method, <u>said image processor</u> comprising:

3   a memory for storing said input image; and

4   a processing part for performing said half tone processing on said input image,

5   wherein said processing part adds a sine wave in which the amplitude and the frequency are

6 modulated according to the average value of the target pixel value and the peripheral pixel values,

7 ~~said~~ diffused quantization errors, and said target pixel value, then quantizes the addition result by

8 a predetermined number of grayscale levels, and calculates the quantization errors of said peripheral

9 pixels from errors by said quantization.

1 Claim 7 (original): The image processor according to Claim 6, wherein said processing part

2 calculates the average value of said target pixel value and said peripheral pixel values, calculates the

3 difference between said target pixel value and said average value, and

4 modulates the amplitude of said sine wave using said average value and said difference.

1 Claim 8 (currently amended): The image processor according to Claim 6, wherein said

2 processing part independently ~~controlls~~ controls the cycle in the horizontal direction and the cycle

3 in the vertical direction of said sine wave.

1 Claim 9 (original): The image processor according to Claim 6, wherein said processing

2 part sets different initial phases of said sine wave for the input image of each color.

1 Claim 10 (original): The image processor according to Claim 6, said processing part scans

2 said input image in two directions and reads said target pixel value and said peripheral pixel values,

3 and calculates said quantization errors using an error filter which is selected from a plurality of error

4   filters according to said target image value.

1   Claim 11 (currently amended): A storage medium for storing a program to perform half tone

2   processing on an input image using an error diffusion method, wherein said program comprises:

3   a program for generating a sine wave in which the amplitude and the frequency are

4   modulated according to the average value of the target pixel value and the peripheral pixel values;

5   a program for adding said diffused quantization errors, said target pixel value and said sine wave;

6   a program for quantizing said addition result by a predetermined number of grayscale levels; and

7   a program for calculating the quantization errors of said peripheral pixels from errors by said

8   quantization.

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